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F. J. PLYM

2,099,751

WINDOW CONSTRUCTION

Filed April 3, 1936

Fig. 1.

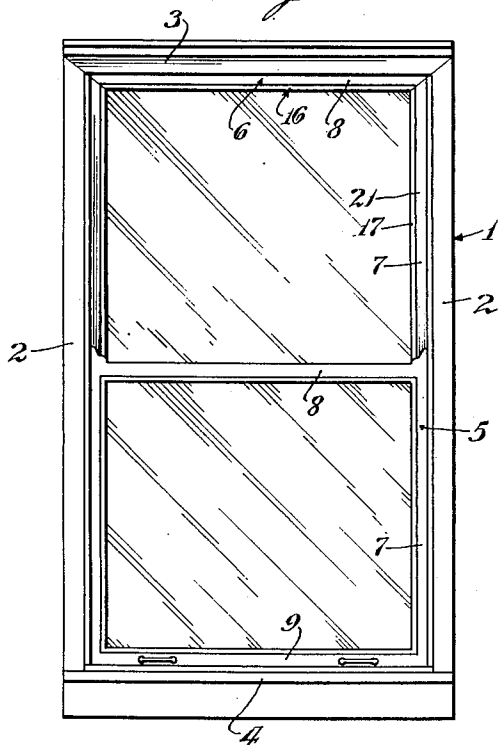


Fig. 3.

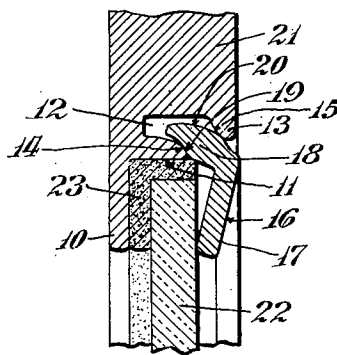


Fig. 4.

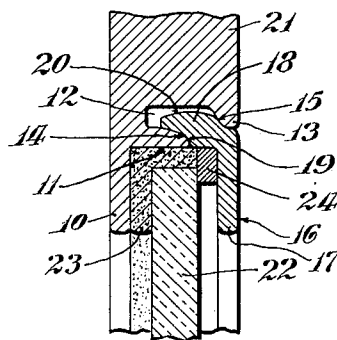


Fig. 2.

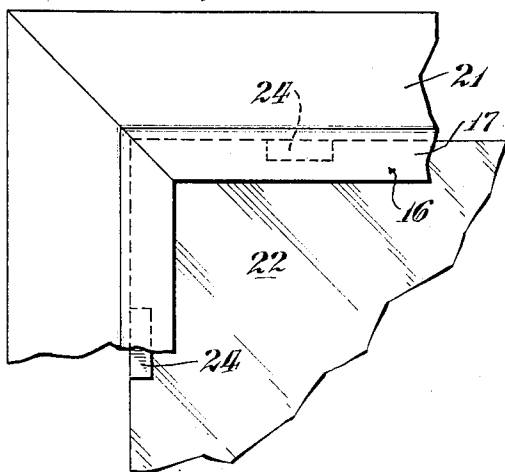
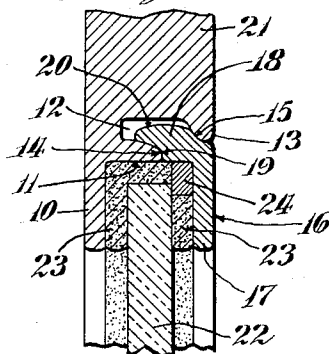


Fig. 5.



Inventor:
Francis J. Plym,
By, Parkinson & Lane,
Attorneys.

UNITED STATES PATENT OFFICE

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WINDOW CONSTRUCTION

Francis J. Plym, Niles, Mich., assignor to The
Kawneer Company, Niles, Mich., a corporation
of Michigan

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3 Claims. (Cl. 20—56.4)

The present invention relates to a window construction and more particularly to a novel means and method of retaining a pane of glass in a window or sash frame.

5 Among the objects of the present invention is to provide a window construction having a novel stop member for retaining the glass in position.

A further object of the invention is to provide a novel means and method of assembling
10 and retaining a window pane.

Another object is to provide a pre-formed window frame or sash structure and a readily attachable stop member for insertion into the frame or sash for retaining the glass in position.
15 tion.

A still further object of the present invention is the provision of a window or sash construction including a stop or retaining member having a part adapted to interengage or interlock with a part on said window or sash member and retain the glass without the use of any further attaching or retaining means.
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Yet another object of the invention is to provide a novel and compact window or sash constructed entirely of metal and having parts so formed, constructed and arranged to permit a ready assembly.
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Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.
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The invention further resides in the construction, combination and arrangement of parts illustrated in the accompanying drawing, and while I have shown therein a preferred embodiment, it is to be understood that the same is susceptible of modification and change, and comprehends other details, arrangements of parts, features and constructions without departing from the spirit of the invention.
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In the drawing:

Fig. 1 is a view in side or front elevation of the interior of a window of the novel construction.
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Fig. 2 is a fragmentary enlarged view in side or front elevation of the window.

Figs. 3, 4, and 5 are fragmentary views in vertical cross section through the sash rail or window frame and glass, and showing the various stages of assembly.
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Referring more particularly to the disclosure in the drawing, the embodiment selected to illustrate the invention comprises a window having
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a frame 1 provided with side jambs 2, 2, head jamb 3 and base or sill 4. Within the frame are mounted slidable sash members 5 and 6, each provided with side rails 7, 7, a top rail 8 and a bottom rail 9. These rails are shown as formed of extruded metal with an inwardly projecting or facing part formed to provide an exterior flange 10, a shoulder or pane seating portion 11 and a slot or channel 12 having an overhanging lip 13 at the inner face of the rail or frame.
5 The rear edge 14 of the shoulder and the edge 15 of the lip provide cam surfaces adapted to receive and direct a stop or retaining member 16 into locking position in the slot or channel 12.
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The stop or retaining member 16 comprises a substantially L-shaped member formed with a glass retaining flange 17 and a projection or leg 18 having a surface contour so formed as to provide an inner cam surface 19 and an outer cam surface 20 adapted to seat against and ride over the cam surfaces on the shoulder or pane seating portion 11 and the overhanging lip 13, respectively, and interlock therewith when the stop is in its predetermined, adjusted position which is in substantial alignment with the inner face 21 of the rail or frame.
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In the assembly of the window, the frame or sash is generally preformed and provided with the connected side, head and base rails or sides. The glass 22 is then set in putty or other suitable plastic or weathering material 23 as shown in Fig. 3. The stop 16 is then forced into the slot or channel 12 by slightly tilting this member so that the cam surface 19 seats against and rides over the cam surface on the shoulder.
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As the projection or leg 18 is moved further into the channel or slot, the surface 20 thereof contacts with and slides over the cam surface of the lip 13. These surfaces direct the stop member into its proper position. To facilitate assembly, after the projection or leg is forced or moved into the channel to its proper depth, one or more small strips 24 are wedged into the space between the face of the glass and the inner side of the flange 17 so as to retain this flange in substantial alignment with the face 21 of the rail or frame. Putty or other waterproof plastic material is then forced into this space and the window or sash is completely assembled.
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Although the invention is shown embodied in a window of the double-hung type in which the four sides or rails are formed to receive the novel stop member, it will be readily apparent that any number of the sides may be so formed and that the invention may be employed in store fronts
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or any other type of window, or in fact in any setting for retaining a pane of glass or the like in position. The assembly of a window is thereby greatly simplified and can be performed with a minimum of effort.

5 Having thus disclosed the invention, I claim:

1. In a metal window construction, a setting for a pane of glass comprising a member provided with a glass retaining flange for one face of the setting and a shoulder intermediate the flange and lip, the shoulder and lip providing a recess therebetween, and a rigid metal stop having a glass retaining flange for the opposite face of the setting and a projection adapted to be received in the recess and interlock with a side of the shoulder and lip for retaining the stop in position.

2. In a metal window construction, a setting for a pane of glass comprising a member provided with a glass retaining flange for one face of the setting, a lip provided at the opposite face of the setting and a shoulder intermediate the flange and lip, the shoulder and lip providing

a recess therebetween, and a rigid stop having a glass retaining flange for the opposite face of the setting and a part adapted to be received in the recess, the shoulder, lip and part being formed with cam surfaces for directing the part into seating engagement with the shoulder and lip and retaining the stop against displacement or removal when the flange thereof is in substantial alignment with the adjacent face of the setting.

3. In a metal window construction, a setting for a pane of glass comprising a member provided with a glass retaining flange for one face of said setting, a recess extending laterally with respect to the plane of the window in the member, the walls of the recess forming cam surfaces, and a rigid metal stop member provided with a glass retaining flange for the other face of the setting and a projection adapted to be received in the recess and having a cam formation adapted to interlock with the cam surfaces of the recess to prevent accidental displacement or removal of the stop member.

FRANCIS J. PLYM.